

REMARKS

In response to the Office Action mailed January 15, 2003, applicant submits the above amendments and the following remarks.

The Examiner has rejected all of the claims presently on file based upon a primary reference, U.S. Patent no. 5,673,320 to Ray et al. (RAY) combined with one or more secondary references.

With respect, it is believed that the primary reference is not applicable to the present invention for at least the following reasons.

According to the Examiner, RAY teaches converting information of a printed document into a storable digital image thereby creating an electronic document.

With respect, the objective of RAY is to validate printed documents and the respective authorized users based on encoded images of the authorized users. Specifically, RAY's method requires the inclusion of encoded data to represent: (i) the image of the authorized user and (ii) document identification. The example that is given by RAY is that of a paper check that is bar coded with two sets of encoded data: a compressed image of the authorized user of the check and document identification such as check sequence number. For this validation scheme to work, the presenter of this paper document is required to have an ID with his image on it. When the presenter produces this paper document at a document presentation site such as a Point of Sale, the reader device in RAY's invention converts the encoded image data on the document to a storable image that is then displayed for visual comparison with the presenter. At the same time, the converted image along with the document identification is sent to a remote DVA (Document Validation Agency) for comparison against the database of images. If the data is authentic, then the remote DVA sends a successful validation signal to the document presentation site. At this point, along with a positive visual identification of the presenter and the image, the system of RAY accepts the present paper documents as validated and the presenter as the authorized user.

The Examiner concludes that the conversion of the information on the printed document into a storable image results in an electronic document. In reality, this conversion does not result in an electronic document in the context of the present application.

In the context of the present application, an electronic document is a generic electronic document type that is to be approved by various individuals. In RAY, the "conversion" – that is, the extraction from the bar code on the paper document of the compressed data representing the image of the authorized user and the document identification data results in two paths (see Fig. 4 and column 6, lines 39 to 41).

Firstly, the "visual validation" path converts the encoded image data from the bar code on the paper document into digital image data that is viewed on a display device (see column 6, lines 42 to 45). **This is obviously not an electronic document in the sense of the present patent application, nor can it be used for electronic approval in parallel by one or more parties.**

Secondly, the "data validation" path converts the encoded image data from the bar code on the paper document into digital image data that is used to compute an Image Validation Value (IVV). This IVV is sent, along with the document identification data that is read from the bar code on the paper document, to the remote DVA (see column 6, lines 55 to 61). If validation is successful at the DVA and at the document presentation site, then the paper document is accepted and confirmed as having been presented by the authorized document presenter (see column 7, lines 9 to 12).

RAY teaches away from the present invention in that RAY is concerned with printing image information onto a printed document (see column 2, lines 57 to 58). The concept of an electronic document as meant in the present application is not part of RAY's invention. Furthermore, the abstract and Fig. 2 do not state that an electronic document is created, as stated by the Examiner. RAY's patent is completely different from the present application in that the present application does not deal with paper documents at all. Rather, the present application deals with electronic documents for the purpose of approving them electronically by several parties in parallel. None of the secondary references, KAZMIERCZAK, U.S. patent no. 5,764,762; JAKUBOWSKI, U.S. patent no. 6,128,737; SHKEDY, U.S. patent no. 6,236,972 and KURATA, JP 403 004 361, can correct the deficiencies of RAY in order to

arrive at the invention as variously claimed in the independent claims and the dependent claims.

Furthermore, although it is believed that the above comments are sufficient to convince the Examiner that RAY teaches away from the present invention, the other statements of the Examiner will be addressed and differences pointed out therein.

The Examiner states "the digital image data is encrypted and the encoded authorization data is formulated for the document (see abstract and column 2, lines 60 to 68). The limitation 'generating an original Data Authentication Code (DAC 0) linked to the electronic document' is met by generation of an image-validation-value (see column 6, lines 25 to 30)." It is believed the Examiner refers to the encrypted IVV that is computed in the "data validation" path as described above. In fact, as stated in the columns referenced by the Examiner, the encoded authorization data consists not only of the digital image data, but also of the document identification data.

The Data Authentication Code (DAC) in the present application consists of standard encoding techniques, such as a one-way hash function, that is later used to determine if the document content has been altered since the computation of the original DAC. The present application also allows for the encryption of the DAC for added security as part of the encrypted Approval Data Packet (ADP) which includes the DAC. It is respectfully submitted that there is a difference between the DAC in the present application and the IVV in RAY's patent.

It is admitted that the present application does not base its patentability on the computation of the DAC in isolation of the entire method as claimed in the independent claims. However, it appears to the Applicant that the method of using the encoded authorization data in RAY does not have any relevance to the method of using the DAC as part of a parallel approval process for electronic documents as claimed in the present application.

The Examiner continues: "The limitation '*making the electronic document available to each user*' is met by units 54 and 56 in Figure 4, showing that the document is issued and presented to a user."

In RAY, the process in Fig. 4 shows that an issuing party prints a document with image and identification data upon request by an authorized document holder (blocks 50 and 52), the printed document is issued to the authorized document holder (block 54) and the document holder presents the printed document at a presentation site (block 56).

In the present application, the person initiating the parallel approval process is the person who issues the electronic document. This electronic document is then made available to each user who needs to electronically approve this electronic document. Each user does not present the electronic document at a presentation site for validation.

Again, the Examiner continues "[t]he limitation '*retrieving DAC 0*' is met by generation of an image-validation-value (see column 6, lines 25 to 30)."

In RAY, generating an image validation value means computing an encrypted code consisting of the image data and the document identification data. In contrast, in the present application, retrieving DAC 0 is a means for recovering the DAC of the electronic document that has already been computed in a previous step of the method. Therefore, the method of the present invention is different than RAY's since the act of retrieving does not consist of or include a means of computing.

The Examiner also states: "The document validation value is compared with the stored document validation value of a selected document (see column 10, lines 55 to 65), which meets the limitation '*comparing DAC x to DAC 0*'."

In RAY, a centralized location or data base (the DVA) is required where all digital image data is stored along with the document identification data for all the printed documents.

While in the present invention, DAC X and DAC 0 are compared as RAY compares the two IVVs, the present invention does not require a centralized location or database since the DAC can be stored inside the document itself in addition to a database. Furthermore, the present invention compares DACs of electronic documents as opposed to data of images that are printed on a paper document.

The Examiner states: "An approval code is produced (see column 10, line 58), which meets '*an approval Data Authentication Code*', recited in the instant claims."

RAY's approval code has no relationship to either the DAC or the Approval Data Packet of the present invention. Furthermore, it does not have any relationship to the process of electronically approving an electronic document in parallel. RAY uses the words "approval code" to indicate that a match is made based on comparing two IVVs (block 78 in Fig. 4), resulting in a document validation signal being sent to the validation requester (see column 5, lines 1 to 3) in order to accept a paper document as validated (block 82 in Fig. 4). There is a significant difference between RAY's approval code and the DAC, ADP, and the process of electronically approving in parallel electronic documents as claimed in the present invention.

Furthermore, KAZMIERCZAK does not fill the deficiencies of RAY in order to arrive at the present invention, nor can any of the other secondary references.

For the above reasons, it is respectfully submitted that the present invention is allowable over the prior art of record and a notice to that effect is earnestly solicited.

The Examiner will also note that minor editorial changes have been made throughout the specification for the sake of clarity, and in particular to clarify that the DAC 0 and ADPs may be either linked to the document or stored or incorporated into the document (i.e., embedded into the document). Support for these changes can be found at page 10, lines 15-16 and page 11, lines 21-26.

In addition, Fig. 5B has been amended to clarify that after step vi, the test checks for whether more sections or documents are in need of approval by the user. Support for this change can be found at page 16, lines 16-29.

No new matter has been entered by any of the above-mentioned amendments.

In light of the above amendments and remarks, applicant respectfully submits that the application is in condition for allowance. A separate petition for a two month extension of time is submitted herewith. As the assignee of this application qualifies as a small entity, the fee for this extension is estimated to be \$205.00. Please charge this fee and any other required fees to Pennie & Edmonds LLP deposit account no. 16-1150. The Examiner is invited to call the undersigned attorney if a telephone call could help resolve any remaining items.

Respectfully submitted,

Date: June 16, 2003


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